

6.7 TRAFFIC

6.7.1 Affected Environment

Regional Transportation System

The regional transportation system is discussed in Chapter 5, Section 5.7.

Local Transportation System

The proposed Dillingham Trail between SBMR and DMR would generally follow the existing travel corridor (See Figure 6-9).

Going north, the travel corridor follows Wilikina Drive from SBMR to Kaukonahua Road, Kaukonahua Road from Wilikina Drive to Farrington Highway, and Farrington Highway to DMR. The connection between Farrington Road and DMR is partially via a sugar cane haul road and other local unnamed roads. These roadways are discussed separately.

Kunia Road

Kunia Road (SR 750) between SBMR (Trimble Road or Foote Gate) and Wilikina Drive is a four-lane divided state roadway. The posted speed limit is 35 miles (56 kilometers) per hour. There are signals at the intersections of Kunia Road with Trimble Road and Kunia Road with Wilikina Drive.

The average daily traffic (ADT) is approximately 25,000 VPD. The morning peak-hour traffic volumes are 1,000 vph northbound and 880 vph southbound. The afternoon peak-hour volumes are 1,210 vph northbound and 840 vph southbound.

Wilikina Drive

Wilikina Drive (SR 803) is a four-lane divided roadway between Kunia Road and Funston Gate and a two-lane undivided roadway from Funston Gate to Kaukonahua Road. The posted speed limit is 35 mph from Kunia Road to McNair Gate, 25 mph from McNair Gate to Kamananui Road, and 45 mph from Kamananui Road to Kaukonahua Road. There are traffic signals at the intersections with Macomb Gate and Kamananui Road.

Between Kunia Road and McNair Gate, the ADT is approximately 27,400 vehicles. The northbound and southbound morning peak-hour volumes are 1,080 vph and 1,040 vph, respectively. During the afternoon peak hour, the northbound and southbound volumes are 1,200 vph and 1,100 vph, respectively.

Between McNair Gate and Kamananui Road, the ADT is 16,000 vehicles. The northbound and southbound morning peak hour volumes are 380 vph and 650 vph, respectively. During the afternoon peak hour, the northbound and southbound volumes are 950 vph and 550 vph, respectively.

Figure 6-9

Peak Hour Volumes Worst Case Scenario on Dillingham Trail

Between Kamananui Road and Kaukonahua Road, the ADT is 7,780 vehicles. The northbound and southbound morning peak-hour volumes are 70 vph and 490 vph, respectively. During the afternoon peak hour, the northbound and southbound volumes are 430 vph and 250 vph, respectively.

Kaukonahua Road

Kaukonahua Road is a two-lane undivided state roadway between Wahiawā and Waialua. For approximately one mile (1.6 kilometers) north of Kaukonahua Road, the posted speed limit is 45 mph. North of this point, the speed limit is 35 mph because the terrain constrains the roadway alignment.

Between Kaukonahua Road and Farrington Highway, the ADT is 10,000 vehicles. The northbound and southbound morning peak-hour volumes are 130 vph and 500 vph, respectively. During the afternoon peak hour, the northbound and southbound volumes are 545 vph and 330 vph, respectively.

Farrington Highway

From Kaukonahua Road to DMR, Farrington Highway (SR 930) is a two-lane, undivided state highway. The posted speed limit is 35 mph, except for a short section posted for 45 mph and a section adjacent to Waialua Intermediate School and Waialua High School, where the speed limit is reduced to 25 mph.

Along Farrington Highway in Waialua, the ADT is approximately 8,800 vehicles. The eastbound and westbound morning peak hour volumes are 305 vph and 240 vph, respectively. During the afternoon peak hour, the eastbound and westbound volumes are 300 vph and 390 vph, respectively.

In the vicinity of DMR, the ADT is less than 1,000 vehicles. The morning and afternoon peak hour volumes are less than 100 vph.

6.7.2 Environmental Consequences

This section addresses the environmental consequences of the Proposed Action and No Action on traffic.

Summary of Impacts

A summary of traffic impacts at DMR is shown in Table 6-14. Intersection operations, roadway segment operations, construction traffic, and parking impacts would be less than significant with the Proposed Action and Reduced Land Acquisition Alternative. There would be no traffic impacts under No Action.

Table 6-14
Summary of Potential Traffic Impacts at DMR

Impact Issues	Proposed Action	Reduced Land Acquisition	No Action
Intersection operations	⊗	⊗	○
Roadway segment operations	⊗	⊗	○
Construction traffic	⊗	⊗	○
Parking	○	○	○

In cases when there would be both beneficial and adverse impacts, both are shown on this table. Mitigation measures would only apply to adverse impacts.

LEGEND:

⊗ = Significant	+	= Beneficial impact
⊗ = Significant but mitigable to less than significant	N/A	= Not applicable
⊗ = Less than significant		
○ = No impact		

Proposed Action (Preferred Alternative)

Strykers would be used, up to one company level, for off-road training. Troops would be transported by Strykers and trucks up to one company level plus support trucks.

A perpetual easement of 55 acres (22 hectares) would be acquired for Dillingham Trail. The road would be constructed on private plantation roads owned by Dole Food Co., Inc., and other private landowners. After the Proposed Action is implemented, users of those plantation roads would use other roads to access their agricultural lands. Dillingham Trail is proposed to be a one-lane gravel road, 15 feet (5 meters) wide and approximately 11 miles (18 kilometers) long, connecting SBMR to DMR. The proposed Dillingham Trail would not be open to the public. The estimated military vehicle traffic between SBMR and DMR is shown in Table 6-15.

Less than Significant Impacts

Intersection operations. Dillingham Trail would cross state highways at two locations. The first crossing would be at Kaukonahua Road north of Farrington Highway. The peak-hour traffic volumes along this section of Kaukonahua Road are 412 vph during the morning peak hour and 489 vph during the afternoon peak hour (HDOT 2001).

The second crossing would be at Farrington Highway, west of Kaukonahua Road. The morning and afternoon peak hourly traffic volumes along Farrington Road at this location are 547 and 690 vph, respectively.

A LOS analysis was performed for the crossings using the following assumptions:

- The maximum number of vehicles was used for calculations (four convoys of 24 vehicles each, sequenced at 15-minute intervals);

- The convoys would stop for traffic along the state highways, so an intersection would be two-way stop sign-controlled; and
- The convoys would approach the state highways during the peak hour of traffic. As noted above, convoys would be scheduled for non-peak hours, but, by assuming peak-hour conditions, a worst-case condition was analyzed.

Table 6-15
Estimated Military Vehicle Traffic Between SBMR and DMR

	Vehicle Density (vehicles per convoy)	Trail-Roadway Split	Annual Frequency (times per year)
Company Level Exercise, Legacy Force			
Trucks	15	All road	4
Company Level Exercise, Proposed Action			
Trucks	37	50/50	4 ¹
Strykers	27	50/50	4 ¹
Battalion Level Exercise, Legacy Force			
Trucks	0 ²	0	0
Battalion Level Exercise, Proposed Action			
Trucks	2	50/50	4
Strykers	37	50/50	4

Source: John Gallup & Associates 2002

Notes: ¹Brigade Headquarters and Headquarters Company (HHC) performs exercises four times per year.

²The Legacy Brigade would not conduct multi-location exercises.

According to the LOS analysis, both state highway crossings would operate at LOS C under worst-case conditions. Convoy traffic would experience delays because they would yield to traffic along the state highways. Because the convoys would yield to through traffic, there would be no impact on LOS on public highways. The identified impact would be less than significant, and no mitigation would be necessary.

Roadway segment operations. The number of military vehicles using the proposed Dillingham Trail would be minimal. The maximum number of vehicles per convoy would be 24. Convoys would be sequenced at 15- to 30-minute intervals, so the maximum hourly volume would be 96 vehicles per hour. Convoys would be scheduled during non-peak traffic hours, thus reducing potential impacts on peak-hour traffic conditions. The identified impact would be less than significant, and no mitigation would be necessary.

Construction traffic. Construction associated with the Proposed Action would generate additional traffic from worker vehicles and trucks. However, construction traffic would be temporary and minimal in relation to overall traffic levels.

To minimize traffic impacts to the surrounding community during construction, a construction traffic management program would be implemented. The program would

include staggered work hours to reduce impacts from construction workers during peak hours, identified truck routes to limit truck traffic to major streets, and designated parking for construction workers. Since project traffic does not significantly affect operations at the intersections and street segments in the project vicinity and traffic is generally free flowing, the interim construction worker traffic impacts would not be significant. The identified impact would be less than significant, and no mitigation would be necessary.

No Impacts

Parking. No parking impacts are expected from the proposed change.

Reduced Land Acquisition Alternative

The impacts associated with Reduced Land Acquisition would be identical to those described for the Proposed Action.

No Action Alternative

Less than Significant Impacts

Roadway segment operations. Under No Action, existing conditions from roadway segment operations would continue. Under the status quo of No Action, impacts to traffic would continue at their current levels. Legacy forces would continue to travel on public roads to DMR, possibly contributing to roadway congestion. BMPs would be followed. Convoy and transport would only occur at non-peak hours. Advance notice of military transport would be provided to the public in the event of a large-scale convoy activity.

No Impacts

Intersection operations. Under No Action, existing conditions from intersection operations would continue. Under the status quo of No Action, impacts to traffic would continue at their current levels. Use of the facility and operations would remain the same.

Construction traffic. Under No Action, existing conditions from construction traffic would continue. Under the status quo of No Action, impacts to traffic would continue at their current levels.

Parking. Under No Action, existing conditions from parking would continue. Under the status quo of No Action, impacts to traffic would continue at their current levels.